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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Toshiaki Morita

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EXAMINER

DEFRANK, JOSEPH S

ART UNIT

PAPER NUMBER

3724

MAIL DATE

DELIVERY MODE

06/09/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,833	Applicant(s) MORITA, TOSHIAKI	
	Examiner JOSEPH DEFRANK	Art Unit 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-21 is/are pending in the application.
- 4a) Of the above claim(s) 12, 13 and 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11, 14-16 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 March 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment filed on 3/20/09. Claims 11-21 are pending. Claims 12, 13, and 17-20 are withdrawn.

Drawings

2. The drawings were received on 3/20/09. These drawings are acceptable.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 11, 14-15, and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Independent claims 11 and 21 contain the limitation "adjusting a suction state without any time delay" which is not explicitly stated in the original disclosure. Although the time delay is referenced (paragraphs 0058-0060), it is never clearly stated that the time delay is completely eliminated. The limitation of adjusting the suction without any time delay is considered new matter.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 11, 14-15, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Independent claims 11 and 21 state the limitation “adjusting a suction state without any time delay” which examiner believes to be physically impossible. In any system, there is going to be an inherent time delay. In the electrical portion of the system, when the signal is sent from the controller to the compressor, the signal travels at a speed, and the wires have a distance. There is going to be a slight delay from when the controller sends the signal to when the signal is received by the compressor to increase (or decrease) suction. Further, in the mechanical part of the system, any suction generating device (i.e. a compressor or some sort of air valve) takes time to perform operations. For example, if the adjustment in suction is to go from -10psi to -12psi, that change does not happen instantly. The air pump has to spool up (which takes time) and the air has to evacuate (which also takes time). No matter what, there is always going to be at least a very slight delay in an electro-mechanical system. The delay might be heavily reduced as compared to prior setups, but some sort of delay (if just sending electrical current through a wire) will always exist. For the purpose of examination, this limitation will be interpreted as “without any substantial time delay” given the issues stated above.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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9. Claims 11 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerber (US 3,682,750; as previously cited) in view of Kinta (US 5,277,092; as previously cited).

10. With respect to claim 11, Gerber discloses a method for adjusting suction of a cutting machine when cutting is performed with the cutting machine in which a sheet material (14) is sucked and held on a table (surface 42) and a cutting blade (20) is moved with respect to the table based on preset data, comprising: while an already-cut portion is covered with a sealing sheet (26) so as to prevent leakage from increasing, as cutting progresses. Gerber does not disclose the method further comprising the steps of confirming an extent of leakage from an already-cut portion, and adjusting a suction state without any substantial time delay so as to compensate for reduction, due to the leakage, in a holding force on the sheet material on the table, and in consideration of a covered state with the sealing sheet.

Kinta discloses a similar type cutting method and machine wherein a pressure sensor (D1) confirms an extend of leakage from an already-cut portion, and adjusting a suction state (blower speed based on an input pressure by 91) so as to compensate for reduction, due to the leakage, in a holding force on sheet material on the table. Kinta uses the pressure sensor to monitor the holding pressure and adjust the blower speed in order to hold a preset value of holding pressure (see column 1 lines 56-68). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the method of Gerber to include sensing means to detect pressure drops as a result of cutting and a feedback circuit to adjust the blower speed to maintain

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the holding force in view of the teachings of Kinta. Examiner notes that the device of Gerber has a sealing sheet and the method of Kinta senses the pressure as a whole, so when placed with the method of Gerber, the sealing sheet is considered by the pressure sensor.

11. With respect to claims 14 and 15, the modified apparatus of Gerber discloses the method wherein the suction state is adjusted in stages as cutting progresses (both the masking and the suction adjustments are done during cutting), by adjusting for losses in suction from cuts in the sheet material.

12. With respect to claims 16 and 21, Gerber discloses a suction adjustment apparatus, of a cutting machine, for adjusting a suction state, when a sheet material (14) is cut by moving a cutting blade (20) based on preset data in the cutting machine in which a sheet material is sucked and held on a table (42), comprising: mask covering means (24) for covering an already-cut portion with a sealing sheet (26) so as to prevent leakage from increasing. Gerber does not disclose suction amount adjustment means for confirming an extent of leakage from an already-cut portion, and adjusting a suction state without any substantial time delay so as to compensate for reduction, due to the leakage, in a holding force on the sheet material on the table, and in consideration of a covered state with the sealing sheet.

Kinta discloses a similar type cutting machine wherein a pressure sensor (D1) confirms an extend of leakage from an already-cut portion, and adjusting a suction state (blower speed based on an input pressure by 91) so as to compensate for reduction, due to the leakage, in a holding force on sheet material on the table. Kinta uses the

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pressure sensor to monitor the holding pressure and adjust the blower speed in order to hold a preset value of holding pressure (see column 1 lines 56-68). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the apparatus of Gerber to include sensing means to detect pressure drops as a result of cutting and a feedback circuit to adjust the blower speed to maintain the holding force in view of the teachings of Kinta. Examiner notes that the device of Gerber has a sealing sheet and the method of Kinta senses the pressure as a whole, so when placed with the method of Gerber, the sealing sheet is considered by the pressure sensor.

Response to Arguments

13. Applicant's arguments filed with respect to claims 11, 16, and 21 have been fully considered but they are not persuasive.

14. Applicant argues that neither the device of Gerber alone or the device and method of Gerber in view of Kinta functions to adjust the suction without any time delay as there will always be some amount of time to detect the pressure change as taught by the device of Kinta. Examiner is confused as to how this is different than the stated method of the applicant, "as the cutting progresses, the extent of leakage from already cut portions is confirmed based on considerations of the operator, or calculation or data analysis using the suction adjustment apparatus 30 for example, and the suction state is adjusted so as to compensate for reduction due to the leakage" (paragraph 0058 of the publication). Don't calculations and data analysis take time and inherently introduce a slight time delay in the suction adjustment? Further, applicant acknowledges that there

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will always be a delay in the adjustment in paragraph 0060. Further, it is going to be physically impossible to place the mask down immediately after the blade cuts because there has to be a spacing between the blade and naturally, there will be another form of delay. Also, there will be a lag in the blower as it has to spool up (or down) to increase the suction amount (or decrease) in response to the cutting.

15. Further, applicant argues that that there is no reason to combine the references of Gerber and Kinta. Examiner respectfully disagrees. Kinta explicitly states that the pressure monitoring system is used to monitor the holding pressure and adjust the blower speed in order to hold a preset value of holding pressure (see column 1 lines 56-68). This is the rationale for the combination.

Conclusion

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSEPH DEFRANK whose telephone number is (571)270-3512. The examiner can normally be reached on Monday - Thursday; 9am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Boyer D. Ashley/
Supervisory Patent Examiner, Art Unit 3724

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6/1/09
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